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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,118	10/31/2003	Jon M. Long	9818-091-999	5011

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EXAMINER	
LOUIE, WAI SING	

ART UNIT	PAPER NUMBER
2814	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/699,118	LONG ET AL.	
	Examiner	Art Unit	
	Wai-Sing Louie	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al. (US 6,765,228).

With regard to claim 1, Lin et al. disclose a bonding pad with separate bonding and probing area (col. 4, line 13 to col. 5, line 59 and fig. 5) comprising:

- a bonding area 48 for receiving a bonding wire 62 (col. 5, lines 40-45 and fig. 5 and fig. 7);
- an elongated probing area 50 connected to the bonding area 48 for receiving a probing pin 68 of a probing card (col. 5, lines 26-30), the elongated probing area 50 having a long axis and an extension of the long axis intersecting the bonding area 48 (fig. 5 and fig. 8).

With regard to claim 2, Lin et al. disclose the bonding area and elongated probing area are made of aluminum (col. 4, lines 51-53).

With regard to claim 3, Lin et al. disclose the bonding area 48 is substantially a square (fig. 5).

With regard to claim 4, Lin et al. disclose the elongated probing area 50 is substantially a rectangle where the extension of the long axis of the rectangle splits the square into two areas of substantially equal size (fig. 5).

With regard to claim 5, Lin et al. disclose the transverse edge 66 is 60 to 90 μm in length (col. 4, lines 50-51).

2. Claims 6-7 and 9-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Yong et al. (US 6,844,631).

With regard to claim 6, Yong et al. disclose a semiconductor device (col. 1, line 34 to col. 8, line 22 and fig. 3) comprising:

- a semiconductor substrate 26 having an upper surface, electrical components 16 being formed in the semiconductor substrate 26 (fig. 3);
- a plurality of metal layers 28, 30, and 32 on top of the upper surface of the substrate 26, conductive paths (via) defined in the metal layers being connected to such that the electrical components 16 are connected to selected bonding pads 36 through the conductive paths (col. 2, lines 46-48 and fig. 3), each bonding pad further comprising:
    - a bonding area 12 located above a region where each of the metal layers overlaps (fig. 1 and fig. 3),
    - an elongated probing area 14 located above a subset of the plurality of metal layers 28, 30, and 32 for receiving a probing pin of a probing card,

the elongated probing area being electrically connected to the bonding area 12 (fig. 1 and fig. 3).

With regard to claims 7 and 16, Yong et al. disclose the elongated probing area has a long dimension and a short dimension and the bonding area is connected to the short dimension of the elongated probing area (fig. 1).

With regard to claim 9, Yong et al. disclose the bonding area is substantially a square (fig. 1).

With regard to claim 10, Yong et al. disclose the elongated probing area is substantially a rectangle (fig. 1).

With regard to claim 11, in addition to the limitations disclosed in claim 7 above, Yong et al. also disclose:

- the substrate 26 further comprising an inner area 24 and an outer area 25, the inner area 24 hosting a plurality of electrical components 16 connected through a plurality of conductive paths disposed on the upper surface of the substrate 26 (fig. 3).

With regard to claim 12, Yong et al. disclose the bonding area 36 is located over and connected to a stack of metal layers 28, 30, and 32 and at least one of the metal layers 16 are connected to at least one conductive paths (fig. 3).

With regard to claim 13, Yong et al. disclose the stack of metal layers 28, 30, and 32 are on top of a portion of the upper surface of the substrate that does not host the electrical components (fig. 3).

With regard to claim 14, Yong et al. disclose the elongated probing area comprises on metal layer 35 and at least one electrical components 16 is directly below the probing area (fig. 3).

With regard to claim 15, the bonding area is substantially a square and the probing area is substantially a rectangle (fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yong et al. (US 6,844,631).

With regard to claims 8 and 17, Yong et al. do not disclose the elongated probing area is at least 75 μm long. Since the applicant has not established the criticality of the length stated and since these lengths are in common use in similar devices in the art, it would have been obvious to one of ordinary skill in the art to use these values in the device. Where patentability is said to be based upon particular chosen dimension or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wsl
February 1, 2005.